

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A laser ~~apparatus~~, apparatus comprising:
a laser source;
an optical system for guiding laser beams emitted from the laser source onto a top surface and a back surface of an object to be treated; and
a stage for holding the ~~object~~, object;
wherein the laser apparatus further comprises a reflector disposed between the object and the stage, and the laser beams to be guided to the back surface of the object are reflected at the reflector prior to arrival at the back surface of the object.
2. (Original) An apparatus according to claim 1, wherein the reflectance of the reflector with respect to the laser beams is in the range of 20 to 80%.
3. (Original) An apparatus according to claim 1, wherein the laser beams are reshaped by the optical system to have a linear cross-section.
4. (Currently Amended) A laser ~~apparatus~~, apparatus comprising:
a laser source for emitting a laser light;
a half mirror for dividing the laser light into a first laser light and a second laser light;
an optical system for guiding the first laser light and the second laser light onto a top surface and a back surface of an object to be treated, ~~respectively~~, respectively; and
a substrate holder for holding a substrate provided with the object to be treated;

wherein the optical system includes a filter for attenuating the first laser light;
light; and

~~a substrate holder for holding a substrate;~~

wherein the object to be treated comprises a semiconductor film ~~is formed over~~
the substrate.

5. (Currently Amended) A laser ~~apparatus~~, apparatus comprising:

a laser source for emitting a laser light;

a half mirror for dividing the laser light into a first laser light and a second laser
light; and

an optical system for guiding the first laser light and the second laser light onto a
top surface and a back surface of an object to be treated, ~~respectively~~, respectively;

wherein the optical system includes a filter for attenuating the first laser light;
light; and

wherein the laser beams are reshaped by the optical system to have a linear
cross-section.

6. (Cancelled)

7. (Currently Amended) A method ~~according to claim 6, further comprising the~~
step of forming a semiconductor device comprising:

irradiating a first laser light to a top surface of an object;

irradiating a second laser light to a back surface of the object; and

linearly reshaping the first and second laser lights, lights;

wherein an effective energy intensity I_0 of the first laser light to be applied onto
the top surface is set at a level different from an effective energy intensity I_0' of the
second laser light to be applied onto the back surface;

thereby forming a semiconductor device.

8. (Currently Amended) A method according to claim ~~[[6]]~~ 7, wherein the object is an amorphous semiconductor film or a microcrystalline semiconductor film.

9. (Cancelled)

10. (Currently Amended) A method ~~according to claim 9, further comprising the step of forming a semiconductor device, said method comprising:~~

irradiating a first laser light to a top surface of an object;

irradiating a second laser light to a back surface of the object; and

linearly reshaping the first and second laser lights;

wherein an effective energy intensity I_0 of the first laser light to be applied onto the top surface and an effective energy intensity I_0' of the second laser light to be applied onto the back surface satisfy the relationship of $0 < I_0'/I_0 < 1$ or $1 < I_0'/I_0$.

thereby forming a semiconductor device.

11. (Currently Amended) A method according to claim ~~[[9]]~~ 10, wherein the object is an amorphous semiconductor film or a microcrystalline semiconductor film.

12. (Currently Amended) A method of laser annealing, said method comprising the steps of:

generating laser lights from a laser source used as an oscillating source; and

irradiating a top surface and a back surface of an object with the laser lights,

wherein the laser lights to be applied onto the back surface of the object are reflected at a reflector disposed on the back surface side of the object prior to arrival at the back surface of the ~~object~~, object;

thereby laser annealing the object.

13. (Currently Amended) A method according to claim 12, further comprising ~~the step of~~ linearly reshaping the first and second laser lights.

14. (Original) A method according to claim 12, wherein the object is an amorphous semiconductor film or a microcrystalline semiconductor film.

15. (Currently Amended) A method of laser annealing, said method comprising ~~the steps of~~:

generating laser lights from a laser source used as an oscillating source; and
irradiating a top surface and a back surface of an object with the laser lights,
lights:

wherein the laser lights to be applied onto the back surface of the object are reflected at a reflector disposed on the back surface side of the object prior to arrival at the back surface of the object, and an effective energy intensity I_0 of the laser beams to be applied onto the top surface is set at a level different from an effective energy intensity I_0' of the laser beams to be applied onto the back ~~surface~~, surface;

thereby laser annealing the object.

16. (Currently Amended) A method according to claim 15, further comprising ~~the steps of~~ linearly reshaping the first and second laser lights.

17. (Original) A method according to claim 15, wherein the object is an amorphous semiconductor film or a microcrystalline semiconductor film.

18. (Currently Amended) A method of laser annealing, said method comprising ~~the steps of~~:

generating laser lights from a laser source used as an oscillating source; and

irradiating a top surface and a back surface of an object with the laser lights,
lights;

wherein the laser lights to be applied onto the back surface of the object are reflected at a reflector disposed on the back surface of the object prior to arrival at the back surface of the object, and an effective energy intensity I_o of the laser beams to be applied onto the top surface and an effective energy intensity I_o' of the laser beams to be applied onto the back surface satisfy the relationship of $0 < I_o'/I_o < 1$ or $1 < I_o'/I_o$; thereby laser annealing the object.

19. (Currently Amended) A method according to claim 18, further comprising ~~the steps of~~ linearly reshaping the first and second laser lights.

20. (Original) A method according to claim 18, wherein the object is an amorphous semiconductor film or a microcrystalline semiconductor film.

21. (Currently Amended) A method for forming a semiconductor device, said method comprising ~~the steps of~~:

generating a laser light from a laser source used as an oscillating source;
dividing the laser light into a first laser light and a second laser light through an optical system;
attenuating the first laser light by an attenuation filter;
irradiating a top surface of an object with the attenuated first laser light; and
irradiating a back surface of the object with the second laser light, light;
thereby forming a semiconductor device.

22. (Currently Amended) A method according to claim 21, further comprising ~~the steps of~~ linearly reshaping the first and second laser lights.

23. (Original) A method according to claim 21, wherein the object is an amorphous semiconductor film or a microcrystalline semiconductor film.

24. (Currently Amended) A method for forming a semiconductor device, said method comprising ~~the steps of~~:

generating a laser light from a laser source used as an oscillating source;
dividing the laser light into a first laser light and a second laser light through an optical system;
attenuating the first laser light by an attenuation filter;
irradiating a top surface of an object with the attenuated first laser light; and
irradiating a back surface of the object with the second laser light, light;
wherein an effective energy intensity I_0 of the first laser light to be applied onto the top surface is set at a level different from an effective energy intensity I_0' of the second laser light to be applied onto the back ~~surface~~, surface;
thereby forming a semiconductor device.

25. (Currently Amended) A method according to claim 24, further comprising ~~the steps of~~ linearly reshaping the first and second laser lights.

26. (Original) A method according to claim 24, wherein the object is an amorphous semiconductor film or a microcrystalline semiconductor film.

27. (Currently Amended) A method for forming a semiconductor device, said method comprising ~~the steps of~~:

generating a laser light from a laser source used as an oscillating source; [[and]]
dividing the laser light into a first laser light and a second laser light through an optical system;
attenuating the first laser light by an attenuation filter;

irradiating a top surface of an object with the first laser light; and
irradiating a back surface of the object with the second laser light, ~~light~~; light;
wherein an effective energy intensity I_0 of the first laser light to be applied onto
the top surface and an effective energy intensity I_0' of the second laser light to be
applied onto the back surface satisfy the relationship of $0 < I_0'/I_0 < 1$ or $1 < I_0'/I_0$, I_0'/I_0 ;
thereby forming a semiconductor device.

28. (Currently Amended) A method according to claim 27, further comprising
~~the steps of~~ linearly reshaping the first and second laser lights.

29. (Original) A method according to claim 27, wherein the object is an
amorphous semiconductor film or a microcrystalline semiconductor film.

30. (Currently Amended) A laser ~~apparatus~~, apparatus comprising:
a laser source for emitting a laser light;
a half mirror for dividing the laser light into a first laser light and a second laser
light;
an optical system for guiding the first laser light and the second laser light onto a
top surface and a back surface of an object to be treated, ~~respectively~~, respectively;
a substrate holder for holding a substrate;
wherein the optical system includes a filter for attenuating the second laser light
and cylindrical lenses for reshaping the first and second laser lights linearly; and
~~a substrate holder for holding a substrate~~;
wherein a semiconductor film is formed over the substrate.

31. (Currently Amended) A method for forming a semiconductor device, said
method comprising ~~the steps of~~:
generating a laser light from a laser source used as an oscillating source;

dividing the laser light into a first laser light and a second laser light through an optical system;

linearly reshaping the first and second laser lights;

attenuating the second laser light by an attenuation filter;

irradiating a top surface of an object with the first laser light; and

irradiating a back surface of the object with the attenuated second laser light;

thereby forming a semiconductor device.

32. (Currently Amended) A method for forming a semiconductor device, said method comprising the steps of:

generating a laser light from a laser source used as an oscillating source;

dividing the laser light into a first laser light and a second laser light through an optical system;

linearly reshaping the first and second laser lights;

attenuating the second laser light by an attenuation filter;

irradiating a top surface of an object with the first laser light; and

irradiating a back surface of the object with the attenuated second laser light;
light;

wherein an effective energy intensity I_0 of the first laser light to be applied onto the top surface is set at a level different from an effective energy intensity I_0' of the second laser light to be applied onto the back ~~surface~~, surface;

thereby forming a semiconductor device.

33. (Currently Amended) A method for forming a semiconductor device, said method comprising the steps of:

generating a laser light from a laser source used as an oscillating source; [[and]]

dividing the laser light into a first laser light and a second laser light through an optical system;

linearly reshaping the first and second laser lights;
attenuating the second laser light by an attenuation filter;
irradiating a top surface of an object with the first laser light; and
irradiating a back surface of the object with the attenuated second laser light,
light;

wherein an effective energy intensity I_0 of the first laser light to be applied onto the top surface and an effective energy intensity I_0' of the second laser light to be applied onto the back surface satisfy the relationship of $0 < I_0'/I_0 < 1$ or $1 < I_0'/I_0$.

34. (Currently Amended) A method for forming a semiconductor device, said method comprising:

generating a laser light from a laser source used as an oscillating source;
dividing the laser light into a first laser light and a second laser light through an optical system;

linearly reshaping the first and second laser lights;
attenuating the first laser light; and
irradiating a surface of an object with the attenuated first laser light and the second laser light at a same position,

wherein an effective energy intensity I_0 of the first laser light is set at a level different from an effective energy intensity I_0' of the second laser light at the same position.

35. (Currently Amended) A method for forming a semiconductor device, said method comprising:

generating a laser light from a laser source used as an oscillating source; [[and]]
dividing the laser light into a first laser light and a second laser light through an optical system;

linearly reshaping the first and second laser lights;

attenuating the first laser light;

irradiating a surface of an object with the attenuated first laser light and the second laser light at a same ~~position~~, position;

wherein an effective energy intensity I_0 of the first laser light and an effective energy intensity I_0' of the second laser light satisfy the relationship of $0 < I_0'/I_0 < 1$ or $1 < I_0'/I_0$ at the same position.

36. (Currently Amended) A laser ~~apparatus~~, apparatus comprising:

a laser source;

an optical system for guiding laser beams emitted from the laser source onto a top surface and a back surface of an object to be treated, said object provided over a substrate; and

a stage for holding the ~~object~~, substrate;

wherein the laser apparatus further comprises a reflector disposed between the object and the stage;

wherein said reflector is in contact with the substrate.

37. (New) A method according to claim 36, wherein the laser beams to be guided to the back surface of the object are reflected at the reflector prior to arrival at the back surface of the object.